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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,656	03/15/2001	Torsten Mangold	1475	3419

7590 11/04/2002

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EXAMINER

GONZALEZ, JULIO C

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,656

Applicant(s)

MANGOLD ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 August 2002 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the layered metal sheets joined together as disclosed in claim 1 and the hub and the sensor ring as disclosed in claim 2 and the knurling on the tubes as disclosed in claim 22 and the second cooling system in the interior of the stator as disclosed in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The proposed drawing correction filed on 08/29/02 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).

3. The drawings are objected to because claim 5 discloses the cooling system on the interior of the stator, but from figure 3, it seems like if the cooling system is

outside the stator. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is disclosed that the rotor and stator are composed of structural elements, especially, layered and joined together metal sheets. Is the rotor and stator made of layered metal sheets elements? Or is it just the stator? From the claim, it may seem if both, the rotor and stator are made of layered metal sheets elements, are they? Also, what is meant by "the metal sheets of the structural elements of the stator having a suitable geometry for creating the structural elements of the stator directly"? Is the stator creating the structural element? Or are the structural elements creating the stator? It may seem like if the stator is creating itself. Also, in claim 1, what is considered the base body of the rotor? The shaft? The hub?

In claims 5, 6, the cooling system is disclosed to be in the interior of the stator, yet, the cooling system is on the "outer edge of the stator"? Is the cooling system on the interior or exterior part of the stator? It seems like if the cooling system is only located on the outside of the stator and not on the inside of the stator.

In claim 20, what is considered a "short-circuit bar" and a "short-circuit ring"? Are these devices just shape of the stator with unusual names? What are the devices short-circuiting? What the short-circuiting has to do with the cooling device?

In order to advance prosecution in the merits, the Prior Art will be applied as best understood by the examiner.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3-5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable under Watanabe et al in view of Albright et al.

Watanabe discloses a generator with a riveted laminated stator 1 (see figure 1), a rotor and a cooling system in the interior of a stator 1 (see figures 3, 4). However, Watanabe et al does not disclose using a cooling system on the outside of a stator.

On the other hand, Albright et al discloses for the purpose of improving the cooling efficiency of generators, a generator 1 having a stator core 13, a cooling system having tubes 30 formed on an outer part of the stator 1.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a generator as disclosed by Watanabe et al and to modify the invention by having a cooling system outside the stator for the purpose of improving the cooling efficiency of generators as disclosed by Albright et al.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe et al and Albright et al as applied to claim 1 above, and further in view of Takano.

The combined generator discloses all of the elements above. However, the combined generator does not disclose using a ring sensor.

On the other hand, Takano disclose for the purpose of improving the electrical connections of the armature, a sensor ring 33 (see figure 5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined generator as disclosed above and to modify the invention by using a sensor ring for the purpose of improving the electrical connections of the armature as disclosed by Takano.

9. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe et al and Albright et al as applied to claims 3 and 5 above, and further in view of Oda et al.

The combined generator discloses all of the elements above. However, the combined generator does not disclose using a sealing for the cooling system.

On the other hand, Oda teaches that a paint sealing can be used for a cooling system for the purpose of avoiding leaks (column 14, lines 10-13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined generator as disclosed above and to modify the invention by using a sealing means for the purpose of avoiding leaks as disclosed by Oda et al.

10. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe et al and Albright et al as applied to claim 1 above, and further in view of Fakult et al.

The combined generator discloses all of the elements above. However, the combined generator does not disclose that the cooling tubes may be place on recesses on a part of the stator.

On the other hand, Fakult discloses for the purpose improving the performance of electrical machines, a cooling tube 242 with a knurling ends (see figure 19), which cooling tubes are inserted in the stator (see figure 11). Moreover, a short-circuit ring 124 and short-circuit bar 112 are disclosed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined generator as disclosed above and to modify the invention by using cooling tubes for the purpose improving the performance of electrical machines as disclosed by Fakult.

11. In regards to claim(s) 23, the method of making the device is not germane to the issue of patentability of the device itself. Therefore this limitation has not been given patentable weight and will not be considered.

Response to Arguments

12. Applicant's arguments with respect to claims 1-8 and 19-23 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant's arguments filed 08/29/02 have been fully considered but they are not persuasive.

Watanabe et al discloses a stator made of structural elements that are layered and joined together as metal sheets (see figure 1, column 3, lines 1-5).

14. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Watanabe et al and the rest of the reference used that were applied to the claims discuss about electrical machines and method of improving cooling systems to such machines.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



TRAN NGUYEN
PRIMARY EXAMINER

Jcg

October 28, 2002